CONTENTS

Special issue: In Honour of Professor David John Manners	
Professor David John Manners	vii
Influence of the culture medium on the synthesis of α -D-glucans by Streptococcus cricetus AHT G. J. Walker, V. L. Jacques, E. Fiala-Beer (Surry Hills, N.S.W., Australia), and M. E. Slodki	
(Peoria, IL, U.S.A.)	1
The cellobiohydrolase I from <i>Trichoderma reesei</i> QM 9414: action on cello-oligosaccharides M. Vršanská and P. Biely (Bratislava, Czechoslovakia)	19
Roles of the aromatic side chains in the binding of substrates, inhibitors, and cyclomalto-oligo- saccharides to the glucoamylase from <i>Aspergillus niger</i> probed by perturbation difference spectroscopy, chemical modification, and mutagenesis	200
B. Svensson and M. R. Sierks (Valby, Denmark)	29
Characterization of seven xyloglucan oligosaccharides containing from seventeen to twenty glycosyl residues	
M. Hisamatsu, W. S. York, A. G. Darvill, and P. Albersheim (Athens, GA, U.S.A.)	45
The influence of chain length on the hydrodynamic behaviour of amylose	
P. Roger and P. Colonna (Nantes, France)	73
Structural changes during development in the amylose and amylopectin fractions (separated by precipitation with concanavalin A) of starches from maize genotypes	
SH. Yun and N. K. Matheson (Sydney, N.S.W., Australia)	85
Loss of crystalline and molecular order during starch gelatinisation: origin of the enthalpic transition D. Cooke and M. J. Gidley (Bedford, Gt. Britain)	103
Examination of the structure of amylose by tritium labelling of the reducing terminal	
Y. Takeda, N. Maruta, and S. Hizukuri (Kagoshima, Japan)	113
Granule residues and "ghosts" remaining after heating A-type barley-starch granules in water R. D. M. Prentice, J. R. Stark (Edinburgh, Gt. Britain), and M. J. Gidley (Bedford, Gt.	
Britain)	121
The structure of four waxy starches related to gelatinization and retrogradation	
YC. Shi and P. A. Seib (Manhattan, KS, U.S.A.)	13
The polysaccharides of agricultural lupin seeds	
M. T. Al-Kaisey and K. C. B. Wilkie (Old Aberdeen, Gt. Briain)	14
Modification of starch granules by hydrolysis with hydrochloric acid in various alcohols, and the formation of new kinds of limit dextrins	
J. D. Fox and J. F. Robyt (Ames, IA, U.S.A.)	16
Characterisation of the (1→4)-α-D-glucan-branching 6-glycosyltransferase by in vitro synthesis of branched starch polysaccharides	
W. Praznik, G. Rammesmayer, T. Spies (Vienna, Austria), and A. Huber (Graz, Austria)	17
The fine structure of oyster glycogen M. R. S. Rani, K. Shibanuma, and S. Hizukuri (Kagoshima, Japan)	18

Monitoring polysaccharide synthesis in Candida albicans	
J. A. Brown (Edinburgh, Gt. Britain) and B. J. Catley (Dunedin, New Zealand)	195
A study of the heat capacity of starch/water mixtures	
T. R. Noel and S. G. Ring (Norwich, Gt. Britain)	203
Action patterns of amylolytic enzymes as determined by the [1-14C]malto-oligosaccharide mapping method	
J. H. Pazur and N. T. Marchetti (University Park, PA, U.S.A.)	215
Characterization of ADPglucose pyrophosphorylase from a starch-deficient mutant of Arabidopsis thaliana (L.)	
L. Li and J. Preiss (East Lansing, MA, U.S.A.)	227
(1→4)-α-p-Glucan synthesis by a chloroplastic phosphorylase isolated from spinach leaves is independent of added primer	
M. N. Sivak (East Lansing, MI, U.S.A.)	241
Measurement of the content of limit-dextrinase in cereal flours	
B. V. McCleary (North Rocks, N.S.W., Australia)	257
A method for the study of the enzymic hydrolysis of starch granules	
E. Bertoft and R. Manelius (Turku, Finland)	269
Effect of modification on the tryptophan residues of cyclodextrin glucanotransferase with N-	
bromosuccinimide on the enzyme-catalysed hydrolysis (cleavage) of soluble starch and cyclomaltohexaose	
M. Ohnishi, U. Ota, M. Abe, B. Tonomura (Kyoto, Japan), and M. Kubota (Okayama, Japan)	285
The cellulase of the anaerobic bacterium Clostridium thermocellum: isolation, dissociation, and reassociation of the cellulosome	
K. M. Bhat and T. M. Wood (Aberdeen, Gt. Britain)	293
The action of germinated barley alpha-amylases on linear maltodextrins	
A. W. MacGregor, J. E. Morgan, and E. A. MacGregor (Winnipeg, Man., Canada)	301
$Structural characterization of an arabinoxylan-rhamnogal acturon an complex from cell walls of {\it Zea} shoots$	
Y. Kato (Hirosaki, Japan) and D. J. Nevins (Davis, CA, U.S.A.)	315
The substrate specificity of isoamylase and the preparation of apo-glycogenin J. Lomako, W. M. Lomako, and W. J. Whelan (Miami, FL, U.S.A.)	331
Molecular and metabolic aspects of lysosomal glycogen	
R. Geddes, P. Jeyarathan, and J. A. Taylor (Auckland, New Zealand)	339
Molecular modelling of acarviosine, the pseudo-disaccharide moiety of acarbose, and other inhib- itors of alpha-amylases	
E. Raimbaud, A. Buleon, and S. Perez (Nantes, France)	351
Notes	
The detection and quantification of apiose by capillary gas chromatography of its alditol acetates	
P. J. Harris (Parkville, Vict., Australia), M. Sadek, R. T. C. Brownlee (Bundoora, Vict., Australia), A. B. Blakeney (Yanco, N.S.W., Australia), J. Webster, and B. A. Stone	
(Bundoora, Vict., Australia)	365

	xiii
Conformation of 3-O-β-D-galactopyranosyl-L-arabinose and a comparison with its α-linked isomer	251
D. C. Vogt, G. E. Jackson, and A. M. Stephen (Rondebosch, South Africa)	371
A re-investigation of the borohydride reduction of carbohydrates	
R. J. Sturgeon (Edinburgh, Gt. Britain)	375
The action of isoamylase on the surface of starch granules	
A. Lynn and J. R. Stark (Edinburgh, Gt. Britain)	379
Heterogeneity of the glucoamylase components of the raw-starch-digesting amylase from Chalara	
paradoxa	
M. Monma and K. Kainuma (Tsukuba, Japan)	385
Preliminary communication	
The amylase of Pseudomonas stutzeri as a probe of the structure of amylopectin	
P. Finch and D. W. Sebesta (Egham, Gt. Britain)	cl
Author index	c5
	-
Subject index	c7